
Subject: Re: Class A, AB1, B, C Operation/Modes
Posted by [gofar99](#) on Sat, 09 Sep 2023 02:12:53 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi, BTW using an RC or pair of rectifiers between the grounds is not new. I have seen it used as far back as the early 50s. As soon as 3 wire mains showed up it was not far behind apparently. In addition to discovering that old school 2 wire powered radios could bite you I wanted to add to thoughts on separating the grounds and the possibility of getting zinged by an internal fault energizing the input or output jacks if the RC combo I suggest fails. You need two faults one internal and the RC. I considered that. It is a difficult scenario to achieve. Everything I tried resulted in either an amp that would not work or would work so badly that it was clear there was a fault. Anything that resulted in the two grounds being directly connected caused a serious ground based hum. No hazard, but bad operation. I could not energize any input jack or output terminal without it causing an obvious fault in the device. No sound, loud hum or noise. I will grant that in theory if the RC fails open (both parts) and you could cause the signal ground to become highly energized with nothing connected to it that might bleed off the voltage it might be possible to get shocked. It could only happen if nothing else was connected to it that would have its own ground. Anything carrying a signal into the device that had its own ground would act as a path to bleed off the voltage. If the device was already powered up and then the external connection was made there could be a shock hazard between the jack and interconnect. Before that could occur I would expect that the failed device would either blow its fuse or behave so badly that the user would notice and investigate what is wrong. I could wander off into low probability scenarios like lightning strikes that welded parts together and such, but I expect that any user of an electrical device would have at least a minimum of intelligence and accept some responsibility for their own safety.
